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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,423	02/22/2002	Hideki Miyazaki	A8319.0015/P015	7011

24998 7590 08/29/2003

DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP  
2101 L STREET NW  
WASHINGTON, DC 20037-1526

EXAMINER
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TIBBITS, PIA FLORENCE

ART UNIT	PAPER NUMBER
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2838

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/079,423

Applicant(s)

MIYAZAKI ET AL.

Examiner

Pia F Tibbits

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office action is in response to the election filed August 11, 2003. Claims 1-6 are elected.

#### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the conventional names, as described in the specification, e.g. current detector, etc. for the elements shown in figures 1-11 with non-conventional symbols. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1: the statement "isolating or potential converting units" is confusing since it suggests that the same unit performs both functions. Furthermore, applicant is reminded that "or" should only be used with alternate terms, e.g., rod or bars, etc.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji et al.

[hereinafter Tsuji][5998969].

Tsuji discloses a battery apparatus, comprising plural battery modules M1-Mn connected in series each having plural battery cells connected in series C1-Cn; plural low order control devices CC1-CCn, which are provided in correspondence with the plural battery modules, respectively, each of the plural low order control devices controlling the plural battery cells C1-Cn configuring corresponding one of the plural battery modules M1-Mn; a high order control device BC which controls the plural low order control devices CC1-CCn; isolating units IF which connects an input terminal of the low order control device at a highest potential among the plural low order control devices, an output terminal of the low order control device at a lowest potential among the plural low order control devices, and the high order control device; and interruption elements S1-Sn each of which is disposed between the output terminal of corresponding one of the plural low order control devices and the battery cell in corresponding one of the plural battery modules M1-Mn on a low potential side and blocks discharge current of the battery cells C1-Cn in the corresponding battery module, wherein terminals related to input and output of a signal are connected in an electrically non-isolated state among the plural low order control devices [see also column 3, lines 47-61, and lines 66-67, column 4, lines 1-13]. Tsuji does not disclose isolating or potential converting units, which are part of the same unit. However Tsuji discloses an A/D converter. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make integral the isolating or potential converting units, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routing skill in the art. **Howard v. Detroit Stove Works**, 150 U.S. 164 (1893).

With respect to the method claims 4 and 5: the method steps will be met during the normal operation of the apparatus described above.

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7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

***Allowable Subject Matter***

8. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the references of record prior to applicant's filing date discloses, teaches, or suggests a control method of a battery apparatus wherein the low order control device performs capacity adjustment to discharge remaining capacity of one of the battery cells in the corresponding battery module which voltage is higher than a reference value, and the low order control device having completed the capacity adjustment is placed into a sleep mode.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatus.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is (703) 308-7305. If unavailable, contact the Supervisory Patent Examiner Mike Sherry whose telephone number is (703) 308-1680.

11. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

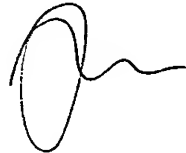
Papers related to Technology Center 2800 applications only may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must

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be clearly marked "DRAFT". The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (703) 308-7722 or (703) 308-7724.

PFT

August 20, 2003

A handwritten signature in black ink, consisting of a large, stylized 'P' followed by a wavy line.